

Application No. OH0026492

Issue Date: June 30, 2003

Effective Date: August 1, 2003

Expiration Date: June 30, 2008

Ohio Environmental Protection Agency
Authorization to Discharge Under the
National Pollutant Discharge Elimination System

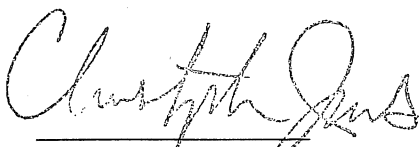
In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et. seq., hereinafter referred to as the "Act"), and the Ohio Water Pollution Control Act (Ohio Revised Code Section 6111),

City of Miamisburg

is authorized by the Ohio Environmental Protection Agency, hereinafter referred to as "Ohio EPA," to discharge from the wastewater treatment works located at 9139 Dayton-Cincinnati Pike, Miamisburg, Ohio, Montgomery County and discharging to the Great Miami River in accordance with the conditions specified in Parts I, II, and III of this permit.

This permit is conditioned upon payment of applicable fees as required by Section 3745.11 of the Ohio Revised Code.

This permit and the authorization to discharge shall expire at midnight on the expiration date shown above. In order to receive authorization to discharge beyond the above date of expiration, the permittee shall submit such information and forms as are required by the Ohio EPA no later than 180 days prior to the above date of expiration.



Christopher Jones
Director

Total Pages: 27

Part I, A. - INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the permit effective date and lasting 6 months from the effective date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfall: 1PD00017001. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Final Outfall - 001 - Interim

Effluent Characteristic Parameter	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00010 - Water Temperature - C	-	-	-	-	-	-	-	1/Day	Maximum Indicating Thermometer	All
00300 - Dissolved Oxygen - mg/l	-	5.0	-	-	-	-	-	1/Day	Multiple Grab	All
00515 - Residue, Total Dissolved - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00530 - Total Suspended Solids - mg/l	-	-	45	30	-	511	341	3/Week	Composite	All
00556 - Oil and Grease, Freon Extr-Grav Meth - mg/l	10	-	-	-	-	-	-	1/Month	Grab	All
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	23	15	-	261	170	3/Week	Composite	Winter
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	13.5	9.0	-	153	102	3/Week	Composite	Summer
00625 - Nitrogen Kjeldahl, Total - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00630 - Nitrite Plus Nitrate, Total - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00665 - Phosphorus, Total (P) - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00719 - Cyanide, Free - mg/l	-	-	-	-	-	-	-	1/Quarter	Grab	Quarterly
01009 - Barium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/2 months	Composite	Bimonthly
01074 - Nickel, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01084 - Strontium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/2 months	Composite	Bimonthly
01094 - Zinc, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01113 - Cadmium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01114 - Lead, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01118 - Chromium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly

Effluent Characteristic Parameter	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units		Loading* kg/day					Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
01119 - Copper, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01220 - Chromium, Dissolved Hexavalent - ug/l	-	-	-	-	-	-	-	1/Quarter	Grab	Quarterly
31616 - Fecal Coliform - #/100 ml	-	-	2000	1000	-	-	-	3/Week	Grab	Summer
39340 - Gamma-BHC, Total - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
39380 - Dieldrin, Whole Sample - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	Continuous	All
50060 - Chlorine, Total Residual - mg/l	0.038	-	-	-	-	-	-	1/Day	Multiple Grab	Summer
50092 - Mercury, Total (Low Level) - ng/l	2100	-	-	29	0.024	-	0.0003	1/Month	Grab	All
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1/Day	Multiple Grab	All
61942 - pH, Minimum - S.U.	-	6.5	-	-	-	-	-	1/Day	Multiple Grab	All
80082 - CBOD 5 day - mg/l	-	-	40	25	-	454	284	3/Week	Composite	All

NOTES for Station Number 1PD00017001:

* Effluent loadings based on average design flow of 3.0 MGD.

Total residual chlorine - See Part II, Items H and J.

Free cyanide - See Part II, Item P.

Mercury - See Schedule of Compliance.

Gamma-BHC and Dieldrin - See Part II, Item O.

Bimonthly - January, March, May, July, September, November

Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning 6 months from the permit effective date and lasting until the permit expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfall: 1PD00017001 . See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Final Outfall - 001 - Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00010 - Water Temperature - C	-	-	-	-	-	-	-	1/Day	Maximum Indicating Thermometer	All
00300 - Dissolved Oxygen - mg/l	-	5.0	-	-	-	-	-	1/Day	Multiple Grab	All
00515 - Residue, Total Dissolved - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00530 - Total Suspended Solids - mg/l	-	-	33.7	22.5	-	511	341	3/Week	Composite	All
00556 - Oil and Grease, Freon Extr-Grav Meth - mg/l	10.0	-	-	-	-	-	-	1/Month	Grab	All
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	17.2	11.2	-	261	170	3/Week	Composite	Winter
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	10.1	6.7	-	153	102	3/Week	Composite	Summer
00625 - Nitrogen Kjeldahl, Total - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00630 - Nitrite Plus Nitrate, Total - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00665 - Phosphorus, Total (P) - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00719 - Cyanide, Free - mg/l	-	-	-	-	-	-	-	1/Quarter	Grab	Quarterly
01009 - Barium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/2 months	Composite	Bimonthly
01074 - Nickel, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01084 - Strontium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/2 months	Composite	Bimonthly
01094 - Zinc, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01113 - Cadmium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01114 - Lead, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01118 - Chromium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly

Effluent Characteristic Parameter	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
01119 - Copper, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01220 - Chromium, Dissolved Hexavalent - ug/l	-	-	-	-	-	-	-	1/Quarter	Grab	Quarterly
31616 - Fecal Coliform - #/100 ml	-	-	2000	1000	-	-	-	3/Week	Grab	Summer
39340 - Gamma-BHC, Total - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
39380 - Dieldrin, Whole Sample - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	Continuous	All
50060 - Chlorine, Total Residual - mg/l	0.038	-	-	-	-	-	-	1/Day	Multiple Grab	Summer
50092 - Mercury, Total (Low Level) - ng/l	1575	-	-	21	0.024	-	0.0003	1/Month	Grab	All
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1/Day	Multiple Grab	All
61942 - pH, Minimum - S.U.	-	6.5	-	-	-	-	-	1/Day	Multiple Grab	All
80082 - CBOD 5 day - mg/l	-	-	30.0	18.7	-	454	284	3/Week	Composite	All

NOTES for Station Number 1PD00017001:

* Effluent loadings based on average design flow of 4.0 MGD.

Total residual chlorine - See Part II, Items H and J.

Free cyanide - See Part II, Item P.

Mercury - See Schedule of Compliance.

Gamma-BHC and Dieldrin - See Part II, Item O.

Bimonthly - January, March, May, July, September, November

Part I, B. - DOWNSTREAM-FARFIELD MONITORING REQUIREMENTS

1. Downstream-Farfield Monitoring. During the period beginning on the permit effective date and lasting until the permit expiration date, the permittee shall monitor the receiving stream, downstream of the point of discharge, at Station Number 1PD00017901, and report to the Ohio EPA in accordance with the following table. See Part II, OTHER REQUIREMENTS, for location of sampling.

Table - Downstream-Farfield Monitoring - Final

<u>Effluent Characteristic</u>		<u>Discharge Limitations</u>						<u>Monitoring Requirements</u>		
Parameter	Concentration Specified Units		Loading* kg/day					Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00010 - Water Temperature - C	-	-	-	-	-	-	-	1/Month	Grab	All
00300 - Dissolved Oxygen - mg/l	-	-	-	-	-	-	-	1/Month	Grab	All
00400 - pH - S.U.	-	-	-	-	-	-	-	1/Month	Grab	All
00610 - Nitrogen, Ammonia (NH ₃) - mg/l	-	-	-	-	-	-	-	1/Month	Grab	All
00630 - Nitrite Plus Nitrate, Total - mg/l	-	-	-	-	-	-	-	1/Month	Grab	All
00665 - Phosphorus, Total (P) - mg/l	-	-	-	-	-	-	-	1/Month	Grab	All
31616 - Fecal Coliform - #/100 ml	-	-	-	-	-	-	-	1/Month	Grab	Summer

Part I, B. - SLUDGE MONITORING REQUIREMENTS

2. Sludge Monitoring. During the period beginning on the permit effective date and lasting until the permit expiration date, the permittee shall monitor the treatment works' final sludge at Station Number 1PD00017581, and report to the Ohio EPA in accordance with the following table. See Part II, OTHER REQUIREMENTS, for location of sludge sampling.

Table - Sludge Monitoring - 581 - Final

Effluent Characteristic Parameter	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units		Loading* kg/day					Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00400 - pH - S.U.	-	-	-	-	-	-	-	1/Month	Grab	All
00611 - Ammonia (NH3) In Sludge - mg/kg	-	-	-	-	-	-	-	1/Month	Composite	All
00627 - Nitrogen Kjeldahl, Total In Sludge - mg/kg	-	-	-	-	-	-	-	1/Month	Composite	All
00668 - Phosphorus, Total In Sludge - mg/kg	-	-	-	-	-	-	-	1/Month	Composite	All
01003 - Arsenic, Total In Sludge - mg/kg	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01028 - Cadmium, Total In Sludge - mg/kg	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01043 - Copper, Total In Sludge - mg/kg	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01052 - Lead, Total In Sludge - mg/kg	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01068 - Nickel, Total In Sludge - mg/kg	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01093 - Zinc, Total In Sludge - mg/kg	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01148 - Selenium, Total In Sludge - mg/kg	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
70316 - Sludge Weight - Dry Tons	-	-	-	-	-	-	-	1/Day	Total	All
70318 - Sludge Solids, Percent Total - %	-	-	-	-	-	-	-	1/Day	Grab	All
70322 - Sludge Solids, Percent Volatile - %	-	-	-	-	-	-	-	1/Day	Grab	All
71921 - Mercury, Total In Sludge - mg/kg	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
78465 - Molybdenum In Sludge - mg/kg	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly

NOTES for Station Number 1PD00017581:

Monitoring is required when sludge is removed from the wastewater treatment facility and disposed of by land application. If no sludge is removed during the entire month, report "AL" in the first column of the first day of the month on the 4500 Form (Monthly Operating Report). A signature is still required.

Units of mg/kg are on a dry weight basis.

Sludge weight is a calculated total for the sampling period.

Annual dioxin monitoring required - See Part II, Item K.

See Part II, Item N.

Part I, B. - UPSTREAM MONITORING REQUIREMENTS

3. Upstream Monitoring. During the period beginning on the permit effective date and lasting until the permit expiration date, the permittee shall monitor the receiving stream, upstream of the point of discharge at Station Number 1PD00017801, and report to the Ohio EPA in accordance with the following table. See Part II, OTHER REQUIREMENTS, for location of sampling.

Table - Upstream Monitoring - 801 - Final

Effluent Characteristic Parameter	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00010 - Water Temperature - C	-	-	-	-	-	-	-	1/Month	Grab	All
00300 - Dissolved Oxygen - mg/l	-	-	-	-	-	-	-	1/Month	Grab	All
00400 - pH - S.U.	-	-	-	-	-	-	-	1/Month	Grab	All
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	-	-	-	-	-	1/Month	Grab	All
00630 - Nitrite Plus Nitrate, Total - mg/l	-	-	-	-	-	-	-	1/Month	Grab	All
00665 - Phosphorus, Total (P) - mg/l	-	-	-	-	-	-	-	1/Month	Grab	All
31616 - Fecal Coliform - #/100 ml	-	-	-	-	-	-	-	1/Month	Grab	Summer

Part I, B. - INFLUENT MONITORING REQUIREMENTS

4. Influent Monitoring. During the period beginning on the permit effective date and lasting until the permit expiration date, the permittee shall monitor the treatment works' influent wastewater at Station Number 1PD00017601, and report to the Ohio EPA in accordance with the following table. Samples of influent used for determination of net values or percent removal must be taken the same day as those samples of effluent used for that determination. See Part II, OTHER REQUIREMENTS, for location of influent sampling.

Table - Influent Monitoring - 601 - Final

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>							<u>Monitoring Requirements</u>		
Parameter	Concentration Specified Units				Loading* kg/day		Measuring Frequency	Sampling Type	Monitoring Months	
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly				Monthly
00400 - pH - S.U.	-	-	-	-	-	-	-	1/Day	Grab	All
00530 - Total Suspended Solids - mg/l	-	-	-	-	-	-	-	3/Week	Composite	All
80082 - CBOD 5 day - mg/l	-	-	-	-	-	-	-	3/Week	Composite	All

Part I, C - Schedule of Compliance

A. Compliance Schedule for Mercury Variance

1. The permittee shall use EPA Method 1631 to comply with the mercury monitoring requirements of this permit. The method detection level for Method 1631 is 0.2 ng/l. The quantification level is 0.5 ng/l. Because the quantification level for Method 1631 is lower than the mercury effluent limits, it is possible to directly evaluate compliance with the limits.
2. During the period beginning on the effective of this permit and lasting until this permit is modified or renewed, an interim quantification level (QL) of 1.0 ug/l (1000 ng/l) shall apply to analytical results reported for mercury. Any analytical result reported less than the interim QL shall be considered to be in compliance with that limit.

REPORTING:

All analytical results, even those below the QL shall be reported. Analytical results are to be reported as follows:

- a. Results above the QL: Report the analytical result for mercury.
 - b. Results above the MDL, but below the QL: Report the analytical result, even though it is below the QL.
 - c. Results below the MDL: Analytical results below the method detection limit shall be reported as "below detection" using the reporting code "AA".
3. Based on an evaluation of mercury data for outfall 1PD00017001 collected using Method 1631, the permittee shall submit one of the following to Ohio EPA not later than 19 months from the effective date of this permit (Event Code 88899):
 - a. A letter stating that it intends to comply with the water quality based effluent limits for mercury included in the NPDES permit. In this case the permit will be modified to delete the interim quantification level; or
 - b. If the permittee believes that it will be able to take actions leading to compliance with the water quality based effluent limits for mercury included in this NPDES permit, it may submit a request to modify the NPDES permit to include a schedule of compliance and an interim effluent limit for mercury; or

c. If the permittee determines that compliance with the water quality based effluent limits for mercury included in this permit is not possible without the construction of expensive end-of-pipe controls, a variance from the mercury water quality standards is available under section D(10) of rule 3745-33-07. If the permittee determines it is eligible, it may submit an application for coverage under this mercury variance. Section D(10)(a) of rule 3745-33-07 includes information on eligibility for coverage and lists the information that must be included in the application; or

d. If the permittee determines that compliance with the water quality based effluent limits for mercury included in this permit is not possible, and it is not eligible for coverage under the mercury variance available at section D(10) of rule 3745-33-07, it may submit an application for an individual variance from water quality standards. Section (D)(1-3) of rule 3745-33-07 provides information on the applicability and conditions of an individual variance. Section (D)(4) of the rule lists the information that must be included in the application.

This permit may be modified to include either interim limits and a schedule of compliance or new limits and conditions if a variance is issued.

A guidance document explaining both the mercury variance and the individual variance is available. Copies of the final guidance document are available to permittees on request from Ohio EPA, Central Office, Division of Surface Water, Permits Section.

Letters or applications submitted under this item of the Schedule of Compliance shall be sent to the Division of Surface Water at the appropriate Ohio EPA District Office.

Part II, Other Requirements

- A. The wastewater treatment works must be under supervision of a Class III State certified operator as required by rule 3745-7- 02 of the Ohio Administrative Code.
- B. The plant must be staffed and operated in accordance with the Ohio EPA approved Operation and Maintenance Manual.
- C. Description of the location of the required sampling stations are as follows:

Sampling Station	Description of Location
1PD00017001	Final effluent (Lat: 39N 37' 41"; Long: 84W 17' 56")
1PD00017581	Sludge removed for land application
1PD00017601	Raw sewage influent
1PD00017801	Upstream of final effluent discharge
1PD00017901	Downstream of final effluent discharge

D. All parameters, except flow, need not be monitored on days when the plant is not normally staffed (Saturdays, Sundays, and Holidays). On those days, report "AN" on the monthly report form.

E. Composite samples shall be comprised of a series of grab samples collected over a 24-hour period and proportionate in volume to the sewage flow rate at the time of sampling. Such samples shall be collected at such times and locations, and in such a fashion, as to be representative of the facility's overall performance.

F. Grab samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's performance.

G. Multiple grab samples shall be comprised of at least three grab samples collected at intervals of at least three hours during the period that the plant is staffed on each day for sampling. Samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's overall performance. The critical value shall be reported.

H. Effluent disinfection is not directly required, however, the entity is required to meet all applicable discharge permit limits. If disinfection facilities exist, they shall be maintained in an operable condition. Any design of wastewater treatment facilities should provide for the capability to install disinfection if required at a future time. Disinfection may be required if future bacteriological studies or emergency conditions indicate the need.

I. The treatment works must obtain at least 85 percent removal of carbonaceous biochemical oxygen demand (five-day) and suspended solids (see Part III, Item 1).

J. The parameters below have had effluent limitations established that are below the Ohio EPA Quantification Level (OEPA QL) for the 40 CFR 136 promulgated analytical procedure for those parameters. In accordance with the ORC Section 6111.13 and OAC Rule 3745-33-07(C), if a discharge limit is set below the OEPA QL, any analytical result reported less than the OEPA QL shall be considered to be in compliance with that limit. OEPA QLs may be expressed as Practical Quantification Levels (PQL) or Minimum Levels (ML).

The permittee must utilize the lowest available detection method currently approved under 40 CFR Part 136 for monitoring these parameters.

REPORTING:

All analytical results, even those below the OEPA QL (listed below), shall be reported. Analytical results are to be reported as follows:

1. Results above the QL: Report the analytical result for the parameter of concern.
2. Results above the MDL, but below the QL: Report the analytical result, even though it is below the QL.
3. Results below the MDL: Analytical results below the method detection limit shall be reported as "below detection" using the reporting code "AA".

The following table of quantification levels will be used to determine compliance with NPDES permit limits:

Parameter	PQL	ML
Chlorine, Total Residual	0.050 mg/l	--

This permit may be modified, or alternatively, revoked and reissued, to include more stringent effluent limits or conditions if information generated as a result of the conditions of this permit indicate the presence of these pollutants in the discharge at levels above the water quality based effluent limit (WQBEL).

K. Once per year, the permittee shall sample, test, and submit results of a sludge analysis for seven 2,3,7,8 chlorinated dibenzo-p-dioxin congeners, ten 2,3,7,8 chlorinated dibenzofuran congeners, and twelve coplanar polychlorinated biphenyl congeners. The analysis shall be conducted on a composite, representative sample of sludge removed to final use or disposal.

The analysis results shall be reported showing individual isomer concentrations, total class concentration and a calculation of the Total Toxicity Equivalence (TTE). If any individual isomer concentrations are less than the detection limit, a value of one-half (1/2) the detection limit for that isomer shall be used in the calculation of the TTE.

USEPA Method No. 1613B shall be used for the seven 2,3,7,8 chlorinated dibenzo-p-dioxin congeners and ten 2,3,7,8 chlorinated dibenzofuran congeners.

USEPA Method No. 1668A shall be used for the twelve coplanar polychlorinated biphenyl congeners.

Results shall be reported on a form provided by the Director of the Ohio EPA.

Results shall be submitted to: Ohio EPA - Division of Surface Water; Lazarus Government Center; P.O. Box 1049; Columbus, OH 43216-1049.

L. POTWs that accept hazardous wastes by truck, rail, or dedicated pipeline are considered to be hazardous waste treatment, storage, and disposal facilities (TSDFs) and are subject to regulation under the Resource Conservation and Recovery Act (RCRA).

Under the "permit-by-rule" regulation found at 40 CFR 270.60(c), a POTW must

- 1) comply with all conditions of its NPDES permit,
- 2) obtain a RCRA ID number and comply with certain manifest and reporting requirements under RCRA,
- 3) satisfy corrective action requirements, and
- 4) meet all federal, state, and local pretreatment requirements.

M. Final permit limitations based on preliminary or approved waste load allocations are subject to change based on modifications to or finalization of the allocation or report or changes to Water Quality Standards. Monitoring requirements and/or special conditions of this permit are subject to change based on regulatory or policy changes.

N. Not later than January 31 of each calendar year, the permittee shall submit two (2) copies of a report summarizing the sludge disposal and/or reuse activities of the facility during the previous year. One copy of the report shall be sent to the Ohio EPA, Division of Surface Water, Central Office, and one copy of the report shall be sent to the appropriate Ohio EPA District Office. This report shall address:

- 1) Amount of sludge disposed of/reused in dry tons.
- 2) Method(s) of disposal/reuse.
- 3) Summary of all analyses made on the sludge, including any priority pollutant scans that may have been performed. (If a priority pollutant scan has been conducted as a part of the pretreatment program, the most recent analysis should be submitted.)
- 4) Problems encountered including any complaints received. The cause or reason for the problem and corrective actions taken to solve the problem should also be included. Any incidents of interference with the method of sludge disposal shall be identified, along with the cause of interference (i.e., excessive metals concentration, contaminated sludge, etc.) and the corrective actions taken.

O. The permittee shall use analytical procedures approved under 40 CFR 136 with MDLs (method detection levels) less than or equal to those listed below to comply with the monitoring requirements for the following parameters:

	MDL (ug/l)
gamma-BHC	0.030
Dieldrin	0.003

P. It is understood by Ohio EPA that at the time permit 1PD00017*ID becomes effective, an analytical method is not approved under 40 CFR 136 to comply with the free cyanide monitoring requirements included in the permit. The permittee shall utilize method 4500-CN I in the 17th edition of Standard Methods until U.S. EPA promulgates a method for analyzing free cyanide under 40 CFR 136.

PART III - GENERAL CONDITIONS

1. DEFINITIONS

"Daily load" is the total discharge by weight during any calendar day. If only one sample is taken during a day, the weight of pollutant discharge calculated from it is the daily load.

"Daily concentration" means the arithmetic average of all the determinations of concentration made during the day. If only one sample is taken during the day, its concentration is the daily concentration. Coliform bacteria limitations compliance shall be determined using the geometric mean.

"Weekly load" is the total discharge by weight during any 7-day period divided by the number of days in that 7-day period that the facility was in operation. If only one sample is taken in a 7-day period, the weight of pollutant discharge calculated from it is the 7-day load. If more than one sample is taken during the 7-day period, the 7-day load is calculated by determining the daily load for each day sampled, totaling the daily loads for the 7-day period, and dividing by the number of days sampled.

"Weekly concentration" means the arithmetic average of all the determinations of daily concentration limitation made during the 7-day period. If only one sample is taken during the 7-day period, its concentration is the 7-day concentration for that 7-day period. Coliform bacteria limitations compliance shall be determined using the geometric mean.

"Monthly load" is the total discharge by weight during all days in a calendar month divided by the number of days that the facility was in operation during that month. If only one sample is taken during the month the weight of pollutant discharge calculated from it is the monthly load. If more than one sample is taken during the month, the monthly load is calculated by determining the daily load for each day sampled, totaling the daily loads for the month and dividing by the number of days sampled.

"Monthly concentration" means the arithmetic average of all the determinations of daily concentration made during any calendar month. If only one sample is taken during the month, its concentration is the monthly concentration for that period. Coliform bacteria limitations compliance shall be determined using the geometric mean.

"85 percent removal" means the arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

"Absolute Limitations" Compliance with limitations having descriptions of "shall not be less than," "not greater than," "shall not exceed," "minimum," or "maximum" shall be determined from any single value for effluent samples and/or measurements collected.

"Net concentration" shall mean the difference between the concentration of a given substance in a sample taken of the discharge and the concentration of the same substances in a sample taken at the intake which supplies water to the given process. For the purpose of this definition, samples that are taken to determine the net concentration shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"Net load" shall mean the difference between the load of a given substance as calculated from a sample taken of the discharge and the load of the same substance in a sample taken at the intake which supplies water to given process. For purposes of this definition, samples that are taken to determine the net Loading shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"MGD" means million gallons per day.

"mg/l" means milligrams per liter.

"ug/l" means micrograms per liter.

"ng/l" means nanograms per liter.

"S.U." means standard pH unit.

"kg/day" means kilograms per day.

"Reporting Code" is a five digit number used by the Ohio EPA in processing reported data. The reporting code does not imply the type of analysis used nor the sampling techniques employed.

"Quarterly (1/Quarter) sampling frequency" means the sampling shall be done in the months of March, June, August, and December, unless specifically identified otherwise in the Effluent Limitations and Monitoring Requirements table.

"Yearly (1/Year) sampling frequency" means the sampling shall be done in the month of September, unless specifically identified otherwise in the effluent limitations and monitoring requirements table.

"Semi-annual (2/Year) sampling frequency" means the sampling shall be done during the months of June and December, unless specifically identified otherwise.

"Winter" shall be considered to be the period from November 1 through April 30.

"Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

"Summer" shall be considered to be the period from May 1 through October 31.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. GENERAL EFFLUENT LIMITATIONS

The effluent shall, at all times, be free of substances:

- A. In amounts that will settle to form putrescent, or otherwise objectionable, sludge deposits; or that will adversely affect aquatic life or water fowl;
- B. Of an oily, greasy, or surface-active nature, and of other floating debris, in amounts that will form noticeable accumulations of scum, foam or sheen;
- C. In amounts that will alter the natural color or odor of the receiving water to such degree as to create a nuisance;
- D. In amounts that either singly or in combination with other substances are toxic to human, animal, or aquatic life;
- E. In amounts that are conducive to the growth of aquatic weeds or algae to the extent that such growths become inimical to more desirable forms of aquatic life, or create conditions that are unsightly, or constitute a nuisance in any other fashion;
- F. In amounts that will impair designated instream or downstream water uses.

3. FACILITY OPERATION AND QUALITY CONTROL

All wastewater treatment works shall be operated in a manner consistent with the following:

- A. At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with conditions of the permit.
- B. The permittee shall effectively monitor the operation and efficiency of treatment and control facilities and the quantity and quality of the treated discharge.
- C. Maintenance of wastewater treatment works that results in degradation of effluent quality shall be scheduled during non-critical water quality periods and shall be carried out in a manner approved by Ohio EPA as specified in the Paragraph in the PART III entitled, "UNAUTHORIZED DISCHARGES".

4. REPORTING

- A. Monitoring data required by this permit may be submitted in hardcopy format on the Ohio EPA 4500 report form pre-printed by Ohio EPA or an approved facsimile. Ohio EPA 4500 report forms for each individual sampling station are to be received no later than the 15th day of the month following the month-of-interest. The original report form must be signed and mailed to:

Ohio Environmental Protection Agency
Lazarus Government Center
Division of Surface Water
Enforcement Section ES/MOR
P.O. Box 1049
Columbus, Ohio 43216-0149

Monitoring data may also be submitted electronically using Ohio EPA developed SWIMware software. Data must be transmitted to Ohio EPA via electronic mail or the bulletin board system by the 20th day of the month following the month-of-interest. A Surface Water Information Management System (SWIMS) Memorandum of Agreement (MOA) must be signed by the responsible official and submitted to Ohio EPA to receive an authorized Personal Identification Number (PIN) prior to sending data electronically. A hardcopy of the Ohio EPA 4500 form must be generated via SWIMware, signed and maintained onsite for records retention purposes.

B. If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified below, the results of such monitoring shall be included in the calculation and reporting of the values required in the reports specified above.

C. Analyses of pollutants not required by this permit, except as noted in the preceding paragraph, shall not be reported on Ohio EPA report form (4500) but records shall be retained as specified in the paragraph entitled "RECORDS RETENTION".

5. SAMPLING AND ANALYTICAL METHOD

Samples and measurements taken as required herein shall be representative of the volume and nature monitored flow. Test procedures for the analysis of pollutants shall conform to regulation 40 CFR 136, "Test Procedures For The Analysis of Pollutants" unless other test procedures have been specified in this permit. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and instrumentation at intervals to insure accuracy of measurements.

6. RECORDING OF RESULTS

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- A. The exact place and date of sampling; (time of sampling not required on EPA 4500)
- B. The person(s) who performed the sampling or measurements;
- C. The date the analyses were performed on those samples;
- D. The person(s) who performed the analyses;
- E. The analytical techniques or methods used; and
- F. The results of all analyses and measurements.

7. RECORDS RETENTION

The permittee shall retain all of the following records for the wastewater treatment works for a minimum of three years, including:

- A. All sampling and analytical records (including internal sampling data not reported);
- B. All original recordings for any continuous monitoring instrumentation;
- C. All instrumentation, calibration and maintenance records;
- D. All plant operation and maintenance records;
- E. All reports required by this permit; and
- F. Records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report, or application.

These periods will be extended during the course of any unresolved litigation, or when requested by the Regional Administrator or the Ohio EPA. The three year period for retention of records shall start from the date of sample, measurement, report, or application.

8. AVAILABILITY OF REPORTS

Except for data determined by the Ohio EPA to be entitled to confidential status, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the appropriate district offices of the Ohio EPA. Both the Clean Water Act and Section 6111.05 Ohio Revised Code state that effluent data and receiving water quality data shall not be considered confidential.

9. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

10. RIGHT OF ENTRY

The permittee shall allow the Director or an authorized representative upon presentation of credentials and other documents as may be required by law to:

- A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.
- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
- D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

11. UNAUTHORIZED DISCHARGES

A. Bypassing or diverting of wastewater from the treatment works is prohibited unless:

1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

3. The permittee submitted notices as required under paragraph D. of this section,

B. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

C. The Director may approve an unanticipated bypass after considering its adverse effects, if the Director determines that it has met the three conditions listed in paragraph 11.A. of this section.

D. The permittee shall submit notice of an unanticipated bypass as required in section 12. A.

E. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded if that bypass is for essential maintenance to assure efficient operation.

12. NONCOMPLIANCE NOTIFICATION

A. The permittee shall by telephone report any of the following within twenty-four (24) hours of discovery at (toll free) 1-800-282-9378:

1. Any noncompliance which may endanger health or the environment;
2. Any unanticipated bypass which exceeds any effluent limitation in the permit; or
3. Any upset which exceeds any effluent limitation in the permit.
4. Any violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit.

B. For the telephone reports required by Part 12.A., the following information must be included:

1. The times at which the discharge occurred, and was discovered;
2. The approximate amount and the characteristics of the discharge;
3. The stream(s) affected by the discharge;
4. The circumstances which created the discharge;
5. The names and telephone numbers of the persons who have knowledge of these circumstances;
6. What remedial steps are being taken; and
7. The names and telephone numbers of the persons responsible for such remedial steps.

C. These telephone reports shall be confirmed in writing within five days of the discovery of the discharge and/or noncompliance and submitted to the appropriate Ohio EPA district office. The report shall include the following:

1. The limitation(s) which has been exceeded;
2. The extent of the exceedance(s);
3. The cause of the exceedance(s);
4. The period of the exceedance(s) including exact dates and times;
5. If uncorrected, the anticipated time the exceedance(s) is expected to continue, and
6. Steps being taken to reduce, eliminate, and/or prevent occurrence of the exceedance(s).

D. Compliance Schedule Events:

If the permittee is unable to meet any date for achieving an event, as specified in the schedule of compliance, the permittee shall submit a written report to the appropriate district office of the Ohio EPA within 14 days of becoming aware of such situation. The report shall include the following:

1. The compliance event which has been or will be violated;
2. The cause of the violation;
3. The remedial action being taken;
4. The probable date by which compliance will occur; and
5. The probability of complying with subsequent and final events as scheduled.

E. The permittee shall report all instances of noncompliance not reported under paragraphs A, B, or C of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraphs B and C of this section.

F. Where the permittee becomes aware that it failed to submit any relevant application or submitted incorrect information in a permit application or in any report to the director, it shall promptly submit such facts or information.

13. RESERVED

14. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

15. AUTHORIZED DISCHARGES

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than, or at a level in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such violations may result in the imposition of civil and/or criminal penalties as provided for in Section 309 of the Act and Ohio Revised Code Sections 6111.09 and 6111.99.

16. DISCHARGE CHANGES

The following changes must be reported to the appropriate Ohio EPA district office as soon as practicable:

A. For all treatment works, any significant change in character of the discharge which the permittee knows or has reason to believe has occurred or will occur which would constitute cause for modification or revocation and reissuance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Notification of permit changes or anticipated noncompliance does not stay any permit condition.

B. For publicly owned treatment works:

1. Any proposed plant modification, addition, and/or expansion that will change the capacity or efficiency of the plant;
2. The addition of any new significant industrial discharge; and
3. Changes in the quantity or quality of the wastes from existing tributary industrial discharges which will result in significant new or increased discharges of pollutants.

C. For non-publicly owned treatment works any proposed facility expansions, production increases, or process modifications, which will result in new, different, or increased discharges of pollutants.

Following this notice, modifications to the permit may be made to reflect any necessary changes in permit conditions, including any necessary effluent limitations for any pollutants not identified and limited herein. A determination will also be made as to whether a National Environmental Policy Act (NEPA) review will be required. Sections 6111.44 and 6111.45, Ohio Revised Code, require that plans for treatment works or improvements to such works be approved by the Director of the Ohio EPA prior to initiation of construction.

D. In addition to the reporting requirements under 40 CFR 122.41(l) and per 40 CFR 122.42(a), all existing manufacturing, commercial mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit. If that discharge will exceed the highest of the "notification levels" specified in 40 CFR Sections 122.42(a)(1)(i) through 122.42(a)(1)(iv).
2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" specified in 122.42(a)(2)(i) through 122.42(a)(2)(iv).

17. TOXIC POLLUTANTS

The permittee shall comply with effluent standards or prohibitions established under Section 307 (a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement. Following establishment of such standards or prohibitions, the Director shall modify this permit and so notify the permittee.

18. PERMIT MODIFICATION OR REVOCATION

A. After notice and opportunity for a hearing, this permit may be modified or revoked, by the Ohio EPA, in whole or in part during its term for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this permit;
2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
3. Change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

B. Pursuant to rule 3745-33-04, Ohio Administrative Code, the permittee may at any time apply to the Ohio EPA for modification of any part of this permit. The filing of a request by the permittee for a permit modification or revocation does not stay any permit condition. The application for modification should be received by the appropriate Ohio EPA district office at least ninety days before the date on which it is desired that the modification become effective. The application shall be made only on forms approved by the Ohio EPA.

19. TRANSFER OF OWNERSHIP OR CONTROL

This permit may be transferred or assigned and a new owner or successor can be authorized to discharge from this facility, provided the following requirements are met:

A. The permittee shall notify the succeeding owner or successor of the existence of this permit by a letter, a copy of which shall be forwarded to the appropriate Ohio EPA district office. The copy of that letter will serve as the permittee's notice to the Director of the proposed transfer. The copy of that letter shall be received by the appropriate Ohio EPA district office sixty (60) days prior to the proposed date of transfer;

B. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) shall be submitted to the appropriate Ohio EPA district office within sixty days after receipt by the district office of the copy of the letter from the permittee to the succeeding owner;

At anytime during the sixty (60) day period between notification of the proposed transfer and the effective date of the transfer, the Director may prevent the transfer if he concludes that such transfer will jeopardize compliance with the terms and conditions of the permit. If the Director does not prevent transfer, he will modify the permit to reflect the new owner.

20. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

21. SOLIDS DISPOSAL

Collected screenings, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes into waters of the state. For publicly owned treatment works, these shall be disposed of in accordance with the approved Ohio EPA Sludge Management Plan.

22. CONSTRUCTION AFFECTING NAVIGABLE WATERS

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

23. CIVIL AND CRIMINAL LIABILITY

Except as exempted in the permit conditions on UNAUTHORIZED DISCHARGES or UPSETS, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

24. STATE LAWS AND REGULATIONS

Nothing in this permit shall be construed to preclude the institution of any legal action nor relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.

25. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

26. UPSET

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "upset," see Part III, Paragraph 1, DEFINITIONS.

27. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

28. SIGNATORY REQUIREMENTS

All applications submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR 122.22.

All reports submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR Section 122.22.

29. OTHER INFORMATION

A. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

B. ORC 6111.99 provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$25,000 per violation.

C. ORC 6111.99 states that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$25,000 per violation.

D. ORC 6111.99 provides that any person who violates Sections 6111.04, 6111.042, 6111.05, or division (A) of Section 6111.07 of the Revised Code shall be fined not more than \$25,000 or imprisoned not more than one year, or both.

30. NEED TO HALT OR REDUCE ACTIVITY

40 CFR 122.41(c) states that it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with conditions of this permit.

31. APPLICABLE FEDERAL RULES

All references to 40 CFR in this permit mean the version of 40 CFR which is effective as of the effective date of this permit.

32. AVAILABILITY OF PUBLIC SEWERS

Notwithstanding the issuance or non-issuance of an NPDES permit to a semi-public disposal system, whenever the sewage system of a publicly owned treatment works becomes available and accessible, the permittee operating any semi-public disposal system shall abandon the semi-public disposal system and connect it into the publicly owned treatment works.

National Pollutant Discharge Elimination System (NPDES) Permit Program

F A C T S H E E T

Regarding an NPDES Permit To Discharge to Waters of the State of Ohio
for Miamisburg Wastewater Treatment Plant

Public Notice No.: 03-04-041
Public Notice Date: April 22, 2003
Comment Period Ends: May 21, 2003

OEPA Permit No.: 1PD00017*JD
Application No.: OH0026492

Name and Address of Applicant:

City of Miamisburg
10 North First Street
Miamisburg, Ohio 45342

Name and Address of Facility Where
Discharge Occurs:

Miamisburg Wastewater Treatment Plant
9139 Dayton Cincinnati Pike
Miamisburg, Ohio

Receiving Water: Great Miami River

Subsequent
Stream Network: Ohio River

Introduction

Development of a Fact Sheet for NPDES permits is mandated by Title 40 of the Code of Federal Regulations, Section 124.8 and 124.56. This document fulfills the requirements established in those regulations by providing the information necessary to inform the public of actions proposed by the Ohio Environmental Protection Agency, as well as the methods by which the public can participate in the process of finalizing those actions.

This Fact Sheet is prepared in order to document the technical basis and risk management decisions that are considered in the determination of water quality based NPDES Permit effluent limitations. The technical basis for the Fact Sheet may consist of evaluations of promulgated effluent guidelines, existing effluent quality, instream biological, chemical and physical conditions, and the relative risk of alternative effluent limitations. This Fact Sheet details the discretionary decision-making process empowered to the Director by the Clean Water Act and Ohio Water Pollution Control Law (ORC 6111). Decisions to award variances to Water Quality Standards or promulgated effluent guidelines for economic or technological reasons will also be justified in the Fact Sheet where necessary.

Procedures for Participation in the Formulation of Final Determinations

The draft action shall be issued as a final action unless the Director revises the draft after consideration of the record of a public meeting or written comments, or upon disapproval by the Administrator of the U.S. Environmental Protection Agency.

Within thirty days of the date of the Public Notice, any person may request or petition for a public meeting for presentation of evidence, statements or opinions. The purpose of the public meeting is to obtain additional evidence. Statements concerning the issues raised by the party requesting the meeting

are invited. Evidence may be presented by the applicant, the state, and other parties, and following presentation of such evidence other interested persons may present testimony of facts or statements of opinion.

Requests for public meetings shall be in writing and shall state the action of the Director objected to, the questions to be considered, and the reasons the action is contested. Such requests should be addressed to:

Legal Records Section
Lazarus Government Center
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216-1049

Interested persons are invited to submit written comments upon the discharge permit. Comments should be submitted in person or by mail no later than 30 days after the date of this Public Notice. Deliver or mail all comments to:

Ohio Environmental Protection Agency
Attention: Division of Surface Water
Permits and Compliance Section
Lazarus Government Center
P.O. Box 1049
Columbus, Ohio 43216-1049

The OEPA permit number and Public Notice numbers should appear on each page of any submitted comments. All comments received no later than 30 days after the date of the Public Notice will be considered.

Citizens may conduct file reviews regarding specific companies or sites. Appointments are necessary to conduct file reviews, because requests to review files have increased dramatically in recent years. The first 250 pages copied are free. For requests to copy more than 250 pages, there is a five-cent charge for each page copied. Payment is required by check or money order, made payable to Treasurer State of Ohio.

Location of Discharge/Receiving Water Use Classification

The Miamisburg wastewater treatment plant is located on the Great Miami River at river mile 65.05. The Great Miami River, which flows into the Ohio River, is designated for the following uses under Ohio Water Quality Standards (OAC 3745-1-21): Warmwater Habitat, Agricultural Water Supply, Industrial Water Supply, and Primary Contact Recreation. This section of the Great Miami River is identified by Ohio EPA River Code 14-001 and USEPA River Reach number 05080002-008. Figure 1 shows the approximate location of this facility.

Facility Description

The Miamisburg wastewater plant has expanded from an average design flow of 3.0 million gallons per

day (MGD) to 4.0 MGD. It is served by a separate sanitary sewer system. Wet stream processes are: screening at a remote pump station; primary settling, activated sludge aeration, secondary clarification; disinfection by chlorination, dechlorination, and step post aeration. Solid stream processes are sludge thickening, sludge stabilization by anaerobic digestion, dewatering using a belt filter press and drying beds, and recycling of stabilized sludge by land application at agronomic rates.

Miamisburg is not required to implement an Ohio EPA approved industrial pretreatment program. Two categorical industrial users discharge to the wastewater plant. They are regulated under indirect discharge permits issued by Ohio EPA.

Description of Existing Discharge

Table 1 presents a summary of unaltered monthly operating report data for Miamisburg outfall 1PD00017001. Data are presented for the period January 1997 through December 2001, and current permit limits are provided for comparison. Average and maximum projected effluent quality (PEQ) values calculated for the same period of record also are included.

Table 2 presents additional chemical specific data for outfall 001 collected by Ohio EPA. Tables 3 and 4 summarize the results of acute and chronic whole effluent toxicity test conducted by Ohio EPA and the City.

Receiving Water Quality/Environmental Hazard Assessment

The most recent biological data is included in the Technical Support Document (TSD) *Biological and Water Quality Study of the Middle and Lower Great Miami River and Selected Tributaries* (Ohio EPA), which is available at http://www.epa.state.oh.us/dsw/document_index/psdindx.html.

Figure 2 presents the overall assessment of the Great Miami River mainstem (downstream of Tawawa Creek to the mouth) from the *2002 Integrated Water Quality Monitoring and Assessment Report* (Ohio EPA), which is available at <http://www.epa.state.oh.us/dsw/tmdl/2002IntReport/2002OhioIntegratedReport.html>.

Development of Water Quality-Based Effluent Limits

Determining appropriate effluent concentrations is a multiple-step process in which parameters are identified as likely to be discharged by a facility, evaluated with respect to Ohio water quality criteria, and examined to determine the likelihood that the existing effluent could violate the calculated limits.

The assimilative capacity was divided among several facilities in order to account for possible interactivity of the discharges. The CONSWLA model was used to distribute the loads of those conservative parameters requiring allocation. The study area is depicted in Figure 3.

Parameter Selection Effluent data for the Miamisburg wastewater plant were used to determine what parameters should undergo wasteload allocation. The sources of effluent data are as follows:

Self-monitoring data (LEAPS)	January 1997 through December 2001
Ohio EPA data	2000

The effluent data were checked for outliers and no values were removed. The average and maximum projected effluent quality (PEQ) values are presented in Tables 1 and 2. See Table 8 for a summary of the screening results.

Wasteload Allocation For those parameters that require a wasteload allocation (WLA), the results are based on the uses assigned to the receiving waterbody in OAC 3745-1. The applicable waterbody uses for this facility's discharge and the associated stream design flows are as follows:

Aquatic life (WWH)		
Toxics (metals, organics, etc.)	Average	Annual 7Q10
	Maximum	Annual 1Q10
Ammonia-N	Average	Summer/winter 30Q10
Agricultural Water Supply		Harmonic mean flow
Human Health (nondrinking)		Harmonic mean flow

Allocations are developed using a percentage of stream design flow (as specified in Table 6), and allocations cannot exceed the Inside Mixing Zone Maximum criteria.

The data used in the WLA are listed in Tables 5 and 6. The wasteload allocation results to maintain all applicable criteria are presented in Table 7. The current permit limits for ammonia-nitrogen were evaluated and are adequate to maintain the water quality standard for ammonia toxicity, and no increase in ammonia-N load was requested for the expansion from 3.0 to 4.0 MGD.

Whole Effluent Toxicity The allowable effluent toxicity (AET) is a factor considered in evaluating whole effluent toxicity. The AET calculations are similar to those for aquatic life criteria [using the chronic toxicity unit (TU_c) and 7Q10 flow for average and the acute toxicity unit (TU_a) and 1Q10 flow for maximum]. For the Miamisburg plant the AET values are 1.0 TU_a and 64.6 TU_c.

Reasonable Potential/ Effluent Limits/Hazard Management Decisions

After appropriate effluent limits are calculated, the reasonable potential of the discharger to violate the water quality standards must be determined. Each parameter is examined and placed in a defined "group". Parameters that do not have a water quality standard or do not require a wasteload allocation based on the initial screening are assigned to either group 1 or 2. For the allocated parameters, the preliminary effluent limits (PEL) based on the most restrictive average and maximum wasteload allocations are selected from Table 7. The average PEL (PEL_{avg}) is compared to the average PEQ (PEQ_{avg}) from Table 1 or 2, and the PEL_{max} is compared to the PEQ_{max}. Based on the calculated percentage of the allocated value $[(PEQ_{avg} \div PEL_{avg}) \times 100]$, or $[(PEQ_{max} \div PEL_{max}) \times 100]$, the parameters are assigned to group 3, 4, or 5. The groupings are listed in Table 8.

The final effluent limits are determined by evaluating the groupings in conjunction with other applicable rules and regulations. Table 9 presents the final effluent limits and monitoring requirements proposed for Miamisburg outfall 1PD00017001 and the basis for their recommendation.

The Miamisburg treatment plant has been expanded from an average design flow of 3.0 MGD to 4.0 MGD. The concentration limits proposed for dissolved oxygen, CBOD₅ (5-day carbonaceous

biochemical oxygen demand), total suspended solids and ammonia-nitrogen are design criteria for the expanded plant, and they maintain the mass loadings authorized in the current NPDES permit.

The limits proposed for oil and grease, pH and fecal coliform are based on Ohio water quality standards (OAC 3745-1-07). The limit proposed for total residual chlorine is a continuation of the existing permit limit and is the design criteria for the plant. Consistent with OAC 3745-33-07(C), a practical quantification level is proposed for chlorine.

The *Ohio 2002 Integrated Water Quality Monitoring and Assessment Report* (Ohio EPA) lists the Great Miami River mainstem downstream of Tawawa Creek as impaired for aquatic life. Nutrients and organic enrichment/dissolved oxygen are listed as "high magnitude" causes, and major municipal point sources are listed among the "high magnitude" sources. Considering this information and the fact that municipal wastewater treatment plants discharge a nutrient load to the river, monthly monitoring for phosphorus, nitrate + nitrite, and total Kjeldahl nitrogen is proposed based on best engineering judgment. Monitoring for phosphorus and nitrate + nitrite at the upstream and downstream stations also is proposed. The purpose of the monitoring is to maintain a nutrient data set for use in the future TMDL (total maximum daily load) study of the Great Miami River.

Based on reasonable potential for requiring final effluent limits in NPDES permits [OAC 3745-33-07(A)], water quality based effluent limits are proposed for mercury. This pollutant is included in Group 5 under the risk assessment procedures (Table 8). The proposed limits are calculated to maintain the mass loadings authorized in the current NPDES permit. This is consistent with the antidegradation rule (OAC 3745-1-05), since the City did not request an increase in mercury loading in the antidegradation addendum submitted as part of its NPDES renewal application.

The draft permit includes a provision in the Schedule of Compliance regarding monitoring mercury to comply with the proposed effluent limits. On June 22, 1999, EPA Method 1631 was promulgated as an approved method for mercury analysis under 40 CFR 136. The method detection level (MDL) for Method 1631 is 0.2 ng/l, compared to an MDL of 0.2 ug/l for EPA Methods 245.1 and 245.2, which used to be the most sensitive procedures. The quantification level for Method 1631 is 1.0 ng/l, while for the previous method the quantification level was 1,000 ng/l. The permit holder must use EPA Method 1631 to comply with the mercury monitoring requirements of this permit.

Because the quantification level for Method 1631 is lower than the proposed mercury effluent limits, it is possible to directly evaluate compliance with the limits. If compliance with the proposed limits is not possible, a variance from the mercury water quality standards is available under section D of rule 3745-33-07. The proposed compliance schedule provides an interim quantification level of 1000 ng/l (1.0 ug/l) and allows time for the City to collect additional mercury data using Method 1631. The City must then decide if it can comply with the average mercury limit or if it will apply for coverage under the mercury variance.

Strontium, total dissolved solids, dieldrin and gamma-BHC (lindane) included in Group 5 under the risk assessment procedure (Table 8). However, using the discretion allowed in paragraph A(5) of Rule 3745-33-07, monitoring, rather than effluent limits, is proposed for these pollutants. The PEQ values calculated for these pollutants (Table 2) may not be representative of their actual levels in the plant effluent, because they were based on a single data point. The purpose of the proposed monitoring is to collect additional data on the frequency of occurrence and variability of these pollutants in the plant's

effluent.

Based on reasonable potential for requiring monitoring in NPDES permits [OAC 3745-33-07(A)], monitoring is proposed for barium. This pollutant is included in Group 4 under the risk assessment procedures (Table 8). Using the discretion allowed in paragraph (A)(6) of Rule 3745-33-07, the tracking mechanism required for some Group 4 pollutants will not be included in the permit. Only one data point was available for barium [107 ug/l, Table 2], and it is very much lower than the average PEL of 489 ug/l (Table 7).

Based on reasonable potential for requiring monitoring in NPDES permits [OAC 3745-33-07(A)], monitoring is proposed for free cyanide, cadmium, total chromium, dissolved hexavalent chromium, copper, lead, nickel and zinc. Because these pollutants were included in Groups 2 and 3 under the risk assessment procedures (Table 8), monitoring at a reduced frequency of once per quarter is proposed. The purpose of the monitoring is to maintain a current data base on the level of these pollutants in the plant effluent. This data will be used to assess reasonable potential at future permit renewals.

Additional monitoring requirements proposed for the final effluent, influent, upstream/downstream and sludge stations are included for all facilities in Ohio and vary according to the type and size of the discharge. In addition to permit compliance, this data is used to assist in the evaluation of effluent quality and treatment plant performance, for designing plant improvements, and conducting future stream studies.

Based on evaluating the whole effluent toxicity data presented in Tables 3 and 4 and other pertinent data under the provisions of OAC 3745-33-07(B), the Miamisburg wastewater treatment plant is placed in Category 4 with respect to whole effluent toxicity. No toxicity limits or monitoring requirements are proposed.

Dieldrin and gamma-BHC (lindane) are carcinogens detected in the Miamisburg effluent. The reasonable potential for the additive effects of these pollutants to exceed the risk levels specified in OAC 3745-33-07(A)(8) was evaluated. Reasonable potential was not demonstrated, so no limit is proposed for the additivity of carcinogens.

The following pollutants were included in Groups 1, 2 and 3 under the risk assessment procedure (Table 8), and based on reasonable potential for requiring monitoring in NPDES permits [OAC 3745-33-07(A)], no monitoring is proposed: magnesium, manganese (Group 1); chloroform, toluene (Group 2); and 1,4-dichlorobenzene (Group 3).

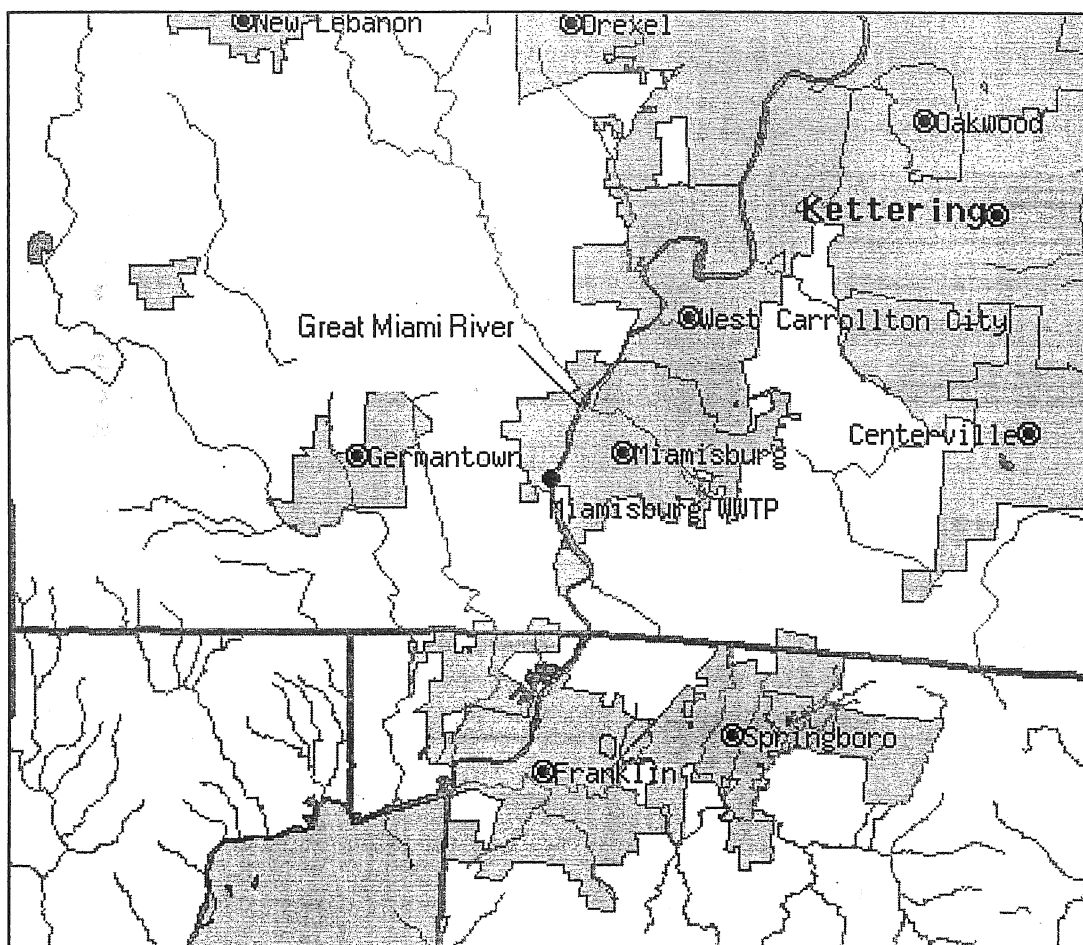


Figure 1. Approximate location of Miamisburg wastewater treatment plant.

Table 1. Effluent Characterization

Summary of current permit limits and unaltered monthly operating report data for Miamisburg wastewater treatment plant outfall 1PD00017001. All values are based on annual records unless otherwise indicated. N = number of analyses; PEQ = projected effluent quality; a = 7 day average. * = for pH, 5th percentile shown in place of 50th percentile; ** = for dissolved oxygen, 5th percentile shown in place of 95th percentile.

PARAMETER	SEASON	UNITS	CURRENT PERMIT		PERIOD = JAN97 THRU DEC01				PERIOD = JAN97 THRU DEC01		
			30 DAY	DAILY	N	50 PCTL	95 PCTL	RANGE	N	PEQavg	PEQmax
AMMONIA NH3-N	MAY-OCT	MG/L	15	23 ^a	356	3.9	16	0.13-33.25	221	8.79	19.1
	NOV-APR	MG/L	15	23 ^a	308	3.6	9.55	0.04-32	142	5.76	11.5
CADMIUM CD,TOT	ANNUAL	UG/L	--	--	3	0	0	0-0	--	--	--
CADMIUM TREC	ANNUAL	UG/L	Monitor		10	0	2.3	0-2.3	13	2.7	3.7
CBOD 5 DAY	MAY-OCT	MG/L	25	40 ^a	353	3	6	1-9	--	--	--
	NOV-APR	MG/L	25	40 ^a	308	4	9	1-19	--	--	--
CHLORINE TOT RESD	ANNUAL	MG/L	--	0.038	828	0	0.03	0-0.3	644	--	--
CHROMIUM CR,TOT	ANNUAL	UG/L	--	--	3	0	0	0-0	--	--	--
CHROMIUM HEX-DIS	ANNUAL	UG/L	Monitor		14	0	0	0-0	14	--	--
CHROMIUM TREC	ANNUAL	UG/L	Monitor		11	0	0	0-3.3	14	3.6	4.9
COD	ANNUAL	MG/L	--	--	10	35	88	24-88	--	--	--
FECAL COLIFORM	ANNUAL	/100ML	1000	2000 ^a	353	48	470	0-16600	--	--	--
CONDUIT FLOW	ANNUAL	MGD	Monitor		1551	2.344	4.571	1.46-9.862	--	--	--
	MAY-OCT	MGD			828	2.18	4.099	1.483-9.862	--	--	--
	NOV-APR	MGD			723	2.639	5.082	1.46-8.907	--	--	--
COPPER CU,TOT	ANNUAL	UG/L	--	--	10	0	9	0-9	--	--	--
COPPER TREC	ANNUAL	UG/L	64	106	39	7.1	12.7	0-17.5	49	12.8	17.5
CYANIDE FREE	ANNUAL	MG/L	Monitor		48	0	0.006	0-0.01	48	0.007	0.010
DISSOLVED OXYGEN	MAY-OCT	MG/L	5.0	Monimum	828	7.5	7**	6.2-8.7	--	--	--
	NOV-APR	MG/L	5.0	minimum	723	7.6	6.8**	5.5-8.6	--	--	--
LEAD PB,TOT	ANNUAL	UG/L	--	--	3	0	0	0-0	--	--	--
LEAD TREC	ANNUAL	UG/L	Monitor		10	0	0	0-0	13	--	--
MERCURY HG,TOT#	ANNUAL	NG/L	29	2100	--	--	--	--	18	60	87
TOT N KJELDAHL	ANNUAL	MG/L	--	--	10	3.8	6.9	1.1-6.9	--	--	--
NICKEL NI,TOT	ANNUAL	UG/L	--	--	3	0	7	0-7	--	--	--
NICKEL TREC	ANNUAL	UG/L	Monitor		10	0	6.3	0-6.3	13	6.5	7.7
NITRITE+NITRATE	ANNUAL	MG/L	Monitor		126	6.3	12.8	0.3-17.8	126	11.6	16.5
OIL&GREASE	ANNUAL	MG/L	--	10	51	0	0	0-9	--	--	--
pH	ANNUAL	S.U.	6.5 - 9.0		61	7.6*	7.9	7.5-7.9	--	--	--
pH MAX	ANNUAL	S.U.	6.5 - 9.0		1490	7.4*	7.8	7.1-8	--	--	--
pH MIN	ANNUAL	S.U.	6.5 - 9.0		1411	7.3*	7.7	6.9-7.8	--	--	--
PHOSPHORUS TOT	ANNUAL	MG/L	Monitor		51	2.23	3.71	0.45-7.48	51	4.0	5.9
SUSPENDED SOLIDS	ANNUAL	MG/L	30	45 ^a	670	5	13	1-204	--	--	--
WATER TEMP.	ANNUAL	DEG C	Monitor		1551	18	22.6	9.1-41	--	--	--
ZINC TOT REC	ANNUAL	UG/L	541	564	41	0	0	0-0	50	--	--
ZINC ZN,TOT	ANNUAL	UG/L	--	--	9	0	0	0-0	--	--	--

Low level mercury data used, beginning July 2000

Table 2. Effluent Characterization

Summary of analytical results for the Miamisburg wastewater treatment plant outfall 1PD00017001. All values are in µg/l unless otherwise indicated. OEPA = data from analyses by Ohio EPA; PT = data from pretreatment program reports; PEQ = projected effluent quality; ND = below detection (detection limit); NA = not analyzed.

PARAMETER	OEPA 05/23/00	PEQavg	PEQmax
Barium	107	484	663
Cadmium	ND(0.200)	See Table 1	
Chromium	ND(30.0)	See Table 1	
Copper	ND(10.0)	See Table 1	
Dissolved solids, total (mg/l)	1070	4843	6634
Lead	ND(2.00)	See Table 1	
Lithium (mg/l)	34	154	211
Manganese	32	145	198
Nickel	ND(40.0)	See Table 1	
Selenium	ND(2.00)	-	--
Strontium	414	1874	2567
Zinc	31	See Table 1	
gamma-BHC*	0.033	0.15	0.20
Chloroform*	0.6	2.72	3.72
1,4-Dichlorobenzene	0.56	2.53	3.47
1,1,1-Trichloroethene*	0.0096	0.043	0.06
Toluene	0.98	4.4	6.1
Carcinogen			

Table 3. Summary of acute toxicity test results on the Miamisburg wastewater treatment plant effluent.

Test Date(a)	Ceriodaphnia dubia 48 hour								Fathead Minnows 96 hour							
	UP ^b	C ^c	LC ₅₀ ^d	EC ₅₀ ^e	%A ^f	%M ^g	TUa ^h	NF ⁱ	UP ^b	C ^c	LC ₅₀ ^d	EC ₅₀ ^e	%A ^f	%M ^g	TUa ^h	NF ⁱ
6-22-99(E)	0	0	> 100	> 100	10	10	0.2	10	2	5	> 100	> 100	0	0	BD	5
11-30-99(E)	0	0	> 100	> 100	0	0	BD	0	35	10	> 100	> 100	15	10	BD	2
6-18-00(E)	0	--	> 100	> 100	--	--	BD	0	5	--	> 100	> 100	45	45	0.9	0
12-12-00(E)	0	0	> 100	> 100	0	0	BD	0	38	2	> 100	> 100	0	0	BD	2
5-23-00(O)*	0	0	> 100	> 100	0	0	BD	0	0	0	> 100	> 100	10	10	0.2	5
5-25-02(O)*	NT	0	> 100	> 100	0	0	BD	NT	NT	5	> 100	> 100	0	0	BD	NT

^a O = EPA test; E = entity test

^b UP = upstream control water

^c C = laboratory water control

^d LC₅₀ = median lethal concentration

^e EC₅₀ = median effects concentration

NT = not tested

* = 48 hour screening test

^f %A = percent adversely affected in 100% effluent

^g %M = percent mortality in 100% effluent

^h TUa = acute toxicity units

ⁱ NF = near field sample in Great Miami River

ND = not determined

BD = below detection

Table 4. Summary of chronic toxicity test results on Miamisburg wastewater treatment plant effluent.

Test Date (a)	<i>Ceriodaphnia dubia</i> 7-Day											<i>Fathead Minnows</i> 7-Day						
	UP ^b	C ^c	IC ₂₅ ^d	TU _c ^e	Survival			Reproduction			FF ⁱ	UP ^b	C ^c	IC ₂₅ ^d	TU _c ^e	Survival	Growth	FF ⁱ
					LOEC ^f	NOEC ^g	TU _c ^h	LOEC ^f	NOEC ^g	TU _c ^h						STU _c ^j	GTU _c ^k	
6-22-99(E)	0	0	92	1.1	> 100	100	BD	> 100	100	BD	0	5	8	100	BD	BD	BD	15
11-30-99(E)	10	10	81.1	1.2	> 100	100	BD	100	30	1.8	10	42	10	> 100	BD	BD	BD	40
6-18-00(E)	10	-	> 100	BD	> 100	100	BD	> 100	100	BD	0	8	-	55.5	1.8	-	-	5.0
12-12-00(E)	0	0	> 100	BD	> 100	100	BD	> 100	100	BD	0	45	2	> 100	BD	BD	BD	48

^aO = EPA test; E = entity test

^bUP = upstream control water

^cC = laboratory water control

^dIC₂₅ = inhibition concentration twenty-five

^eTU_c = chronic toxicity units based on IC₂₅

^fLOEC = lowest observed effects concentration

^gNOEC = no observed effects concentration

^hTU_c = chronic toxicity units based on LOEC and NOEC

ⁱFF = far-field effect

^jSTU_c = TU_c based on LOEC and NOEC for survival

^kGTU_c = TU_c based on LOEC and NOEC for growth

BD = below detection

NT = not tested

Figure 2. Status of Great Miami River Mainstem. From the *2002 Integrated Water Quality Monitoring and Assessment Report* (Ohio EPA)

Table 1. Status of Large Rivers Assessment Units (Detail Table)				
Assessment Unit Description		Watershed Size (sq. mi.)		
Great Miami River Mainstem (downstream Tawawa Creek to mouth)		5371.0		
Aquatic Life Use Assessment				
Sampling Year(s): 1994, 1995, 2000	AU Total Length (miles):	130.41		
	AU Monitored Miles:	130.38		
Aquatic Life Use(s): WWH, MWH-Impounded	# Sites Sampled:	89		
	# Miles Full Attainment:	87.42		
Impairment? Yes	# Miles Partial Attainment:	39.36		
	# Miles Non-Attainment:	3.60		
		% Attainment (Monitored Miles)		
		Full	Partial	Non
Large River AU Attainment Status:		67.0	30.2	2.8
High Magnitude Causes		High Magnitude Sources		
Flow Alteration		Dam Construction - Development		
Other Habitat Alterations		Flow Reg/Mod - Development		
Organic Enrichment/DO		Major Municipal Point Source		
Nutrients		Upstream Impoundment		
Priority Organics		Combined Sewer Overflow		
		Major Industrial Point Source		
		Removal of Riparian Vegetation - Development		
Recreation Use Assessment				
# of Samples w/ an Ohio WQS Violation of the Secondary Contact Recreation Maximum Criterion				
>5000 colonies/100 ml. fecal coliform bacteria: 3				
>576 colonies/100 ml. E. coli bacteria):				
# Sites in AU w/ Bacteria Violations: 2				
Total # Bacteria Sites in AU: 2				
Other:				
Impairment? Indeterminate				
Fish Consumption Assessment				
A "Do Not Eat" Fish Consumption Advisory is in effect for the Great Miami River (all sucker species). The area under the advisory is from the lowhead dam at Monument Avenue in Dayton to the Ohio River. Additionally, a "One Meal per Month" advisory is in effect (Largemouth Bass, Rock bass, Smallmouth Bass, White Bass), and a "One Meal per Week" advisory (Saugeye) for the same stretch of the river. Other advisories include Channel Catfish (One Meal per Week) and Carp (One Meal per Month) from Indian Lake to north of St. Rt. 73 near Middletown. Also, Channel Catfish, Freshwater Drum, Smallmouth Buffalo (One Meal per Week) and Carp, Flathead Catfish and Striped Bass Hybrid (One Meal per 2 months) from south of St. Rt. 73 near Middletown to the Ohio River.				
Integrated Report Assessment Category: 5				
Priority Points: 5				
Scheduled Monitoring: 2008				
Surveys were conducted throughout the mainstem in 1994 (upper Great Miami River) and 1995 (lower Great Miami River). Most of the river is in full or partial attainment of biological criteria. However, a fish consumption advisory for numerous species throughout the length of the mainstem is in effect.				

Figure 3. Great Miami River Study Area

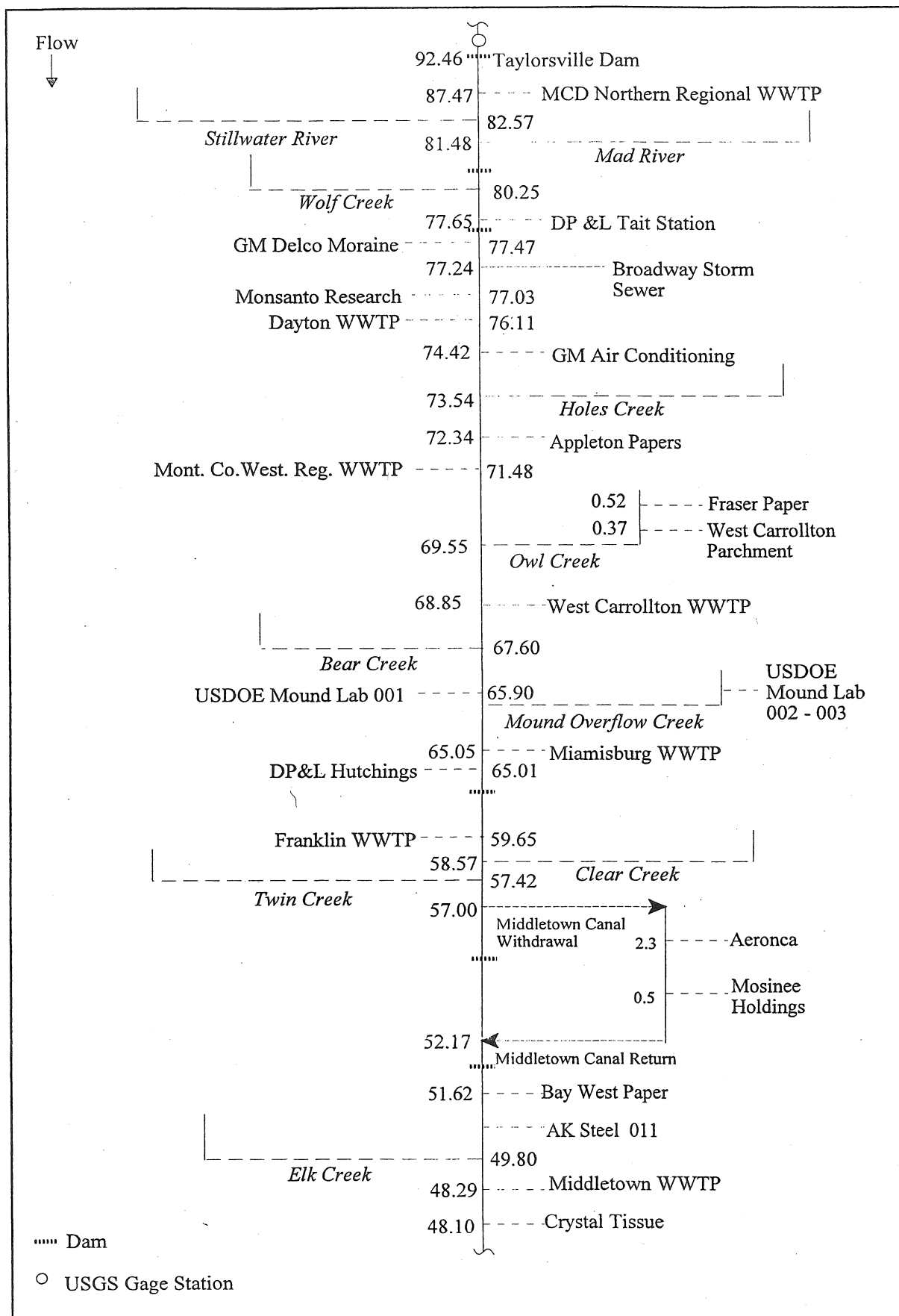


Figure 3 - continued.

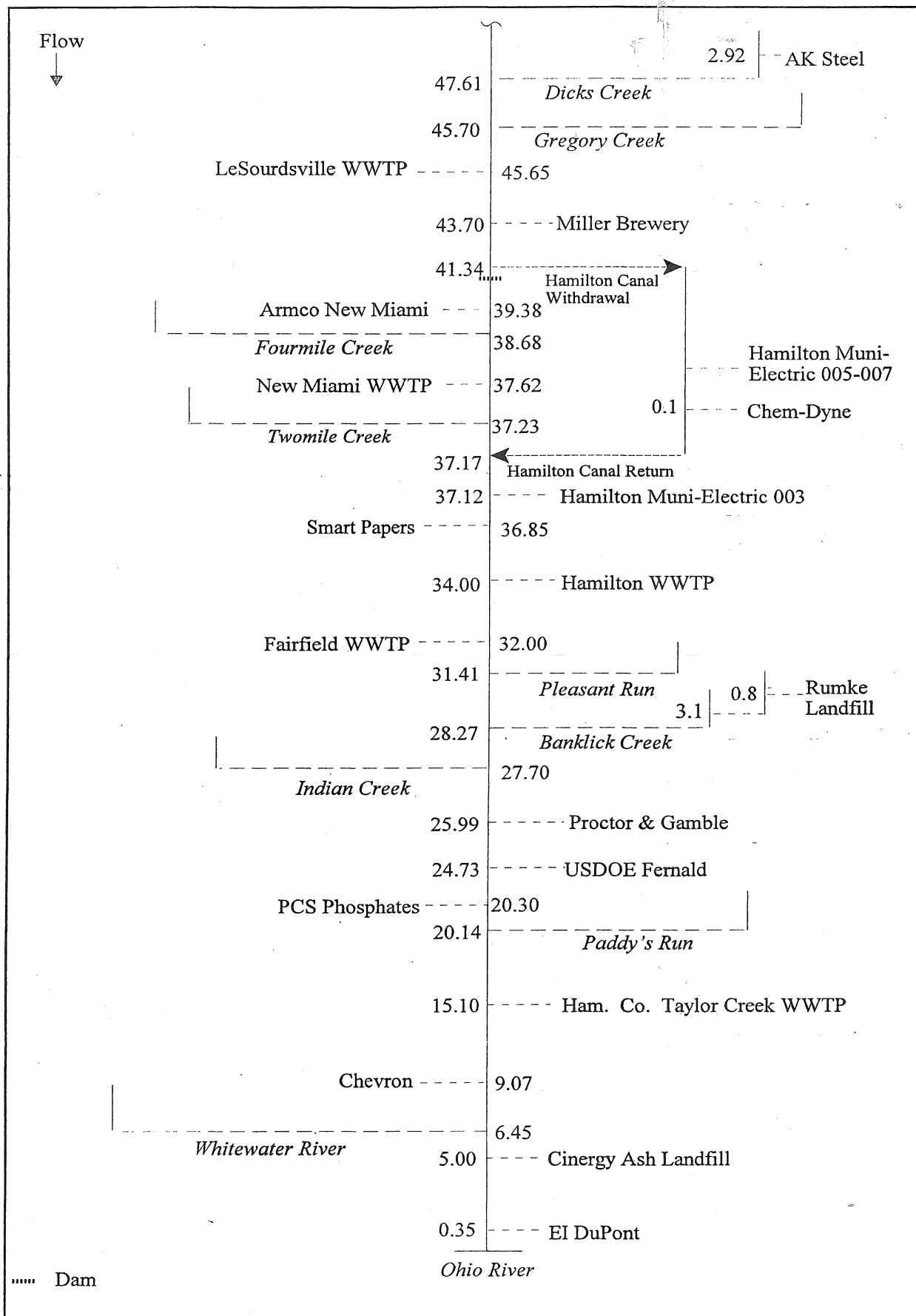


Table 5. Water Quality Criteria in the Study Area

Parameter	Units	Outside Mixing Zone Criteria				Inside Mixing Zone Maximum
		Human Health	Average		Maximum Aquatic Life	
			Agri- culture	Aquatic Life		
Aldrin	µg/l	0.0014	--	--	--	--
Antimony	µg/l	4300.	--	190.	900.	1800.
Arsenic	µg/l	--	100.	150.	340.	680.
Barium	µg/l	--	--	220.	2000.	4000.
Benzene	µg/l	710.	--	160.	700.	1400.
Beryllium	µg/l	280.	100.	71.	610.	1200.
Bis (2-chloroethyl) ether	µg/l	14.	--	--	--	--
Bis (2-ethylhexyl) phthalate	µg/l	59.	--	8.4	1100.	2100.
Boron	µg/l	--	--	950.	8500.	17000.
Bromoform	µg/l	3600.	--	230.	1100.	2200.
Bromomethane (Methyl Bromide)	µg/l	4000.	--	16.	38.	75.
Cadmium	µg/l	--	50.	6.1	17.	34.
Chlorine, total residual	µg/l	--	--	11.	19.	38.
Chlorodibromomethane	µg/l	340.	--	--	--	--
Chloroform	µg/l	4700.	--	140.	1300.	2600.
2-Chlorophenol	µg/l	400.	--	32.	290.	580.
Chromium ⁺⁶ , dissolved	µg/l	--	--	11.	16.	31.
Chromium, total	µg/l	--	100.	220.	4700.	9300.
Cobalt	µg/l	--	--	24.	220.	440.
Copper	µg/l	1300.	500.	25.	42.	84.
Cyanide, free	µg/l	220000.	--	12.	46.	92.
4,4'-DDD	µg/l	0.0084	--	--	--	--
4,4'-DDE	µg/l	0.0059	--	--	--	--
4,4'-DDT	µg/l	0.0059	--	--	--	--
1,4- Dichlorobenzene	µg/l	2600.	--	9.4	57.	110.
Dichlorobromomethane	µg/l	460.	--	--	--	--
2,4-Dichlorophenol	µg/l	790.	--	11.	110.	210.
Dieldrin	µg/l	0.0014	--	0.056	0.24	0.47
Endosulfan	µg/l	240.	--	--	--	--
Endrin	µg/l	0.81	--	0.036	0.086	0.17
Endrin Aldehyde	µg/l	0.81	--	--	--	--
Fluoride	µg/l	--	2000.	--	--	--
Heptachlor	µg/l	0.0021	--	--	--	--
Heptachlor Epoxide	µg/l	0.0011	--	--	--	--
Hexachlorobenzene	µg/l	0.0077	--	--	--	--
alpha-BHC	µg/l	0.13	--	--	--	--

Table 5. Water Quality Criteria in the Study Area - continued.

Parameter	Units	Outside Mixing Zone Criteria				Inside Mixing Zone Maximum
		Human Health	Average		Maximum Aquatic Life	
			Agri-culture	Aquatic Life		
beta-BHC	µg/l	0.46	--	--	--	--
gamma-BHC (Lindane)	µg/l	0.63	--	0.057	0.95	1.9
Iron	µg/l	--	5000.	--	--	--
Lead	µg/l	--	100.	28.	540.	1100.
MBAs	µg/l	--	--	--	500.	--
Mercury	µg/l	0.012	10.	0.91	1.7	3.4
Methylene Chloride	µg/l	16000.	--	1900.	11000.	22000.
Molybdenum	µg/l	--	--	110.	2400.	4700.
Nickel	µg/l	4600.	200.	140.	1300.	2500.
Nitrate + Nitrite	mg/l	--	100	--	--	--
PCBs	µg/l	0.0017	--	--	--	--
Phenol	µg/l	4600000.	--	400.	4700.	9400.
Selenium	µg/l	11000.	50.	5.0	--	--
Silver	µg/l	--	--	1.3	12.	24.
Strontium	µg/l	--	--	770.	6900.	14000.
Tetrachloroethylene	µg/l	89.	--	53.	430.	850.
Thallium	µg/l	6.3	--	17.	79.	160.
Toluene	µg/l	200000.	--	62.	560.	1100.
Total Dissolved Solids	µg/l	--	--	1500000.	--	--
1,1,1-Trichloroethane	µg/l	1030000.	--	76.	690.	1400.
2,4,6-Trichlorophenol	µg/l	65.	--	4.9	39.	79.
Zinc	µg/l	69000.	25000.	320.	320.	640.

Table 6. Instream Conditions and Discharger Flow

Parameter	Units		Value	Basis
Upstream Flow				
GMR at Taylorsville				
7Q10	cfs	summer	52.	USGS gage #03263000, 1921-97 data
		winter	86.	USGS gage #03263000, 1921-97 data
		annual	50.	USGS gage #03263000, 1921-97 data
1Q10	cfs	annual	43.	USGS gage #03263000, 1921-97 data
30Q10	cfs	summer	60.	USGS gage #03263000, 1921-97 data
		winter	116.	USGS gage #03263000, 1921-97 data
Harmonic Mean Flow	cfs	annual	241.	USGS gage #03263000, 1921-97 data
Mixing Assumption (GMR & Tribs.)	%	average	100	Stream-to-discharge ratio
	%	maximum	100	Stream-to-discharge ratio
Stillwater River at Mouth				
7Q10	cfs	summer	16.6	USGS gage #03266000, 1925-97 data
		winter	41.6	USGS gage #03266000, 1925-97 data
		annual	16.6	USGS gage #03266000, 1925-97 data
1Q10	cfs	annual	11.4	USGS gage #03266000, 1925-97 data
30Q10	cfs	summer	22.9	USGS gage #03266000, 1925-97 data
		winter	57.2	USGS gage #03266000, 1925-97 data
Harmonic Mean Flow	cfs	annual	111.3	USGS gage #03266000, 1925-97 data
Mad River at Mouth				
7Q10	cfs	summer	143.8	USGS gage #03270000, 1914-21, 24-97
		winter	182.1	USGS gage #03270000, 1914-21, 24-97
		annual	141.8	USGS gage #03270000, 1914-21, 24-97
1Q10	cfs	annual	134.5	USGS gage #03270000, 1914-21, 24-97
30Q10	cfs	summer	158.3	USGS gage #03270000, 1914-21, 24-97
		winter	212.1	USGS gage #03270000, 1914-21, 24-97
Harmonic Mean Flow	cfs	annual	391.1	USGS gage #03270000, 1914-21, 24-97
Wolf Creek at Mouth				
7Q10	cfs	summer	1.74	USGS gage #03271000, 1938-50, 86-97
		winter	3.38	USGS gage #03271000, 1938-50, 86-97
		annual	1.64	USGS gage #03271000, 1938-50, 86-97
1Q10	cfs	annual	1.33	USGS gage #03271000, 1938-50, 86-97
30Q10	cfs	summer	2.46	USGS gage #03271000, 1938-50, 86-97
		winter	6.35	USGS gage #03271000, 1938-50, 86-97
Harmonic Mean Flow	cfs	annual	12.4	USGS gage #03271000, 1938-50, 86-97

Table 6. Instream Conditions and Discharger Flow - continued.

Parameter	Units		Value	Basis
Twin Creek at Mouth				
7Q10	cfs	summer	5.4	USGS gage #03272000, 1914-23, 27-97
		winter	16.1	USGS gage #03272000, 1914-23, 27-97
		annual	5.4	USGS gage #03272000, 1914-23, 27-97
1Q10	cfs	annual	4.71	USGS gage #03272000, 1914-23, 27-97
30Q10	cfs	summer	7.24	USGS gage #03272000, 1914-23, 27-97
		winter	24.1	USGS gage #03272000, 1914-23, 27-97
Harmonic Mean Flow	cfs	annual	40.5	USGS gage #03272000, 1914-23, 27-97
Four Mile Creek at Mouth				
7Q10	cfs	summer	6.84	USGS gage #03272700, 1970-97 data
		winter	15.5	USGS gage #03272700, 1970-97 data
		annual	6.84	USGS gage #03272700, 1970-97 data
1Q10	cfs	annual	5.92	USGS gage #03272700, 1970-97 data
30Q10	cfs	summer	9.58	USGS gage #03272700, 1970-97 data
		winter	31.9	USGS gage #03272700, 1970-97 data
Harmonic Mean Flow	cfs	annual	50.7	USGS gage #03272700, 1970-97 data
Holes Creek at Mouth				
7Q10	cfs	summer	1.11	USGS gage #03271300, 1959-72 data
		winter	2.55	USGS gage #03271300, 1959-72 data
		annual	1.11	USGS gage #03271300, 1959-72 data
1Q10	cfs	annual	1.11	USGS gage #03271300, 1959-72 data
30Q10	cfs	summer	1.43	USGS gage #03271300, 1959-72 data
		winter	3.5	USGS gage #03271300, 1959-72 data
Harmonic Mean Flow	cfs	annual	8.31	USGS gage #03272000, 1914-23, 27-97
Indian Creek at Mouth				
7Q10	cfs	summer	0.2	USGS gage #03274200, 1961-69 data
		winter	0.5	USGS gage #03274200, 1961-69 data
		annual	0.2	USGS gage #03274200, 1961-69 data
1Q10	cfs	annual	0.2	USGS gage #03274200, 1961-69 data
30Q10	cfs	summer	0.3	USGS gage #03274200, 1961-69 data
		winter	0.8	USGS gage #03274200, 1961-69 data
Harmonic Mean Flow	cfs	annual	1.17	USGS gage #03272800, 1960-72 data

Table 6. Instream Conditions and Discharge Flow - continued.

Parameter	Units		Value	Basis
Clear Creek at Mouth				
7Q10	cfs	summer	0.4	USGS gage #03271700, 1959-69 data
		winter	1.5	USGS gage #03271700, 1959-69 data
		annual	0.4	USGS gage #03271700, 1959-69 data
1Q10	cfs	annual	0.4	USGS gage #03271700, 1959-69 data
30Q10	cfs	summer	0.6	USGS gage #03271700, 1959-69 data
		winter	2.5	USGS gage #03271700, 1959-69 data
Harmonic Mean Flow	cfs	annual	3.0	USGS gage #03272000, 1914-23, 27-97
Elk Creek at Mouth				
7Q10	cfs	summer	0.4	USGS gage #03272200, 1960-67 data
		winter	1.3	USGS gage #03272200, 1960-67 data
		annual	0.4	USGS gage #03272200, 1960-67 data
1Q10	cfs	annual	0.4	USGS gage #03272200, 1960-67 data
30Q10	cfs	summer	0.6	USGS gage #03272200, 1960-67 data
		winter	2.1	USGS gage #03272200, 1960-67 data
Harmonic Mean Flow	cfs	annual	3.0	USGS gage #03272000, 1914-23, 27-97
Bear Creek at Mouth				
7Q10	cfs	summer	2.21	USGS gage #03272000, 1914-23, 27-97
		winter	4.02	USGS gage #03272000, 1914-23, 27-97
		annual	2.21	USGS gage #03272000, 1914-23, 27-97
1Q10	cfs	annual	2.1	USGS gage #03272000, 1914-23, 27-97
30Q10	cfs	summer	2.52	USGS gage #03272000, 1914-23, 27-97
		winter	5.38	USGS gage #03272000, 1914-23, 27-97
Harmonic Mean Flow	cfs	annual	8.14	USGS gage #03272000, 1914-23, 27-97
Gregory Creek at Mouth				
7Q10	cfs	summer	0.26	USGS gage #03272200, 1960-67 data
		winter	0.84	USGS gage #03272200, 1960-67 data
		annual	0.26	USGS gage #03272200, 1960-67 data
1Q10	cfs	annual	0.26	USGS gage #03272200, 1960-67 data
30Q10	cfs	summer	0.39	USGS gage #03272200, 1960-67 data
		winter	1.35	USGS gage #03272200, 1960-67 data
Harmonic Mean Flow	cfs	annual	1.93	USGS gage #03272000, 1914-23, 27-97
Pleasant Run at Mouth				
7Q10	cfs	summer	0.04	USGS gage #03274200, 1961-69 data
		winter	0.10	USGS gage #03274200, 1961-69 data
		annual	0.04	USGS gage #03274200, 1961-69 data
1Q10	cfs	annual	0.04	USGS gage #03274200, 1961-69 data
30Q10	cfs	summer	0.06	USGS gage #03274200, 1961-69 data
		winter	0.16	USGS gage #03274200, 1961-69 data
Harmonic Mean Flow	cfs	annual	0.23	USGS gage #03272800, 1960-72 data

Table 6. Instream Conditions and Discharger Flow - continued.

Parameter	Units		Value	Basis
Banklick Creek at Mouth				
7Q10	cfs	summer	0.01	USGS gage #03274200, 1961-69 data
		winter	0.03	USGS gage #03274200, 1961-69 data
		annual	0.01	USGS gage #03274200, 1961-69 data
1Q10	cfs	annual	0.01	USGS gage #03274200, 1961-69 data
30Q10	cfs	summer	0.02	USGS gage #03274200, 1961-69 data
		winter	0.05	USGS gage #03274200, 1961-69 data
Harmonic Mean Flow	cfs	annual	0.07	USGS gage #03272800, 1960-72 data
Twomile Creek at Mouth				
7Q10	cfs	summer	0.02	USGS gage #03274200, 1961-69 data
		winter	0.04	USGS gage #03274200, 1961-69 data
		annual	0.02	USGS gage #03274200, 1961-69 data
1Q10	cfs	annual	0.02	USGS gage #03274200, 1961-69 data
30Q10	cfs	summer	0.02	USGS gage #03274200, 1961-69 data
		winter	0.06	USGS gage #03274200, 1961-69 data
Harmonic Mean Flow	cfs	annual	0.10	USGS gage #03272800, 1960-72 data
Paddy's Run at Mouth				
7Q10	cfs	summer	0.03	USGS gage #03274200, 1961-69 data
		winter	0.08	USGS gage #03274200, 1961-69 data
		annual	0.03	USGS gage #03274200, 1961-69 data
1Q10	cfs	annual	0.03	USGS gage #03274200, 1961-69 data
30Q10	cfs	summer	0.05	USGS gage #03274200, 1961-69 data
		winter	0.13	USGS gage #03274200, 1961-69 data
Harmonic Mean Flow	cfs	annual	0.19	USGS gage #03272800, 1960-72 data
Instream Hardness				
Instream Hardness	mg/l	annual	320.	STORET/LEAPS; 974 values, 1995-2001

Table 6. Instream Conditions and Discharger Flow - continued.

Parameter	Units		Value	Basis
Background Water Quality				
Aldrin	µg/l	annual	0.	No representative data available.
Alpha-BHC	µg/l	annual	0.	No representative data available.
Antimony	µg/l	annual	0.	No representative data available.
Arsenic	µg/l	annual	1.9	STORET; 8 values, 4 < MDL, 1990-95
Barium	µg/l	annual	0.	No representative data available.
Beryllium	µg/l	annual	0.	No representative data available.
Bis (2-ethylhexyl) phthalate	µg/l	annual	0.	No representative data available.
Bis (2-chloroethyl) ether	µg/l	annual	0.	No representative data available.
Boron	µg/l	annual	0.	No representative data available.
Bromomethane	µg/l	annual	0.	No representative data available.
Cadmium	µg/l	annual	0.1	STORET; 22 values, 19 < MDL, 1989-95
Chlorine, total res	µg/l	annual	0.	No representative data available.
Chloroform	µg/l	annual	0.	No representative data available.
Chromium ⁺⁶ , diss	µg/l	annual	0.	No representative data available.
Chromium, total	µg/l	annual	0.	STORET; 17 values, 17 < MDL, 1989-94
Cobalt	µg/l	annual	0.	No representative data available.
Copper	µg/l	annual	5.	STORET; 22 values, 20 < MDL, 1989-95
Cyanide, free	µg/l	annual	0.	No representative data available.
4,4'-DDE	µg/l	annual	0.	No representative data available.
4,4'-DDT	µg/l	annual	0.	No representative data available.
1,4-Dichlorobenzene	µg/l	annual	0.	No representative data available.
2,4-Dichlorophenol	µg/l	annual	0.	No representative data available.
Dieldrin	µg/l	annual	0.	No representative data available.
Endrin	µg/l	annual	0.	No representative data available.
Fluoride	µg/l	annual	0.	No representative data available.
Gamma-BHC	µg/l	annual	0.	No representative data available.
Heptachlor	µg/l	annual	0.	No representative data available.
Heptachlor epoxide	µg/l	annual	0.	No representative data available.
Hexachlorobenzene	µg/l	annual	0.	No representative data available.
Iron	µg/l	annual	1375.	STORET; 12 values, 0 < MDL, 1989-94
Lead	µg/l	annual	1.	STORET; 22 values, 16 < MDL, 1989-95
Mercury	µg/l	annual	0.	No representative data available.
Molybdenum	µg/l	annual	0.	No representative data available.
Nickel	µg/l	annual	0.	STORET; 22 values, 22 < MDL, 1989-95
Nitrate + Nitrite	mg/l	annual	2.91	STORET; 34 values, 0 < MDL, 1989-95
Selenium	µg/l	annual	1.25	STORET; 8 values, 7 < MDL, 1990-95
Silver	µg/l	annual	0.	No representative data available.
Strontium	µg/l	annual	0.	No representative data available.
TDS	mg/l	annual	408.	STORET; 11 values, 0 < MDL, 1990-95
2,4,6- Trichlorophenol	µg/l	annual	0.	No representative data available.
Zinc	µg/l	annual	10.	STORET; 22 values, 10 < MDL, 1989-95
Miamisburg WWTP flow				
cfs	design	6.19	Expansion Flow	

Table 7. Summary of Effluent Limits to Maintain Applicable Water Quality Criteria

Parameter	Average			Maximum Aquatic Life	Inside Mixing Zone Life	Maximum
	Human Units	Agri Health	Aquatic Supply			
Barium	µg/l	--	--	489	4272. ^A	4000.
Cadmium	µg/l	--	225. ^A	13.	36. ^A	34.
Copper	µg/l	4628. ^A	1777. ^A	45.	72.	84.
Cyanide, free	µg/l	868000. ^A	--	23.	83.	92.
1,4- Dichlorobenzene	µg/l	117500. ^A	--	195. ^A	1163. ^A	110.
Dieldrin	µg/l	.011	--	0.3	1.2 ^A	0.47
gamma-BHC	µg/l	3.5 ^A	--	0.1	2.3 ^A	1.9
Mercury	µg/l	.048	40. ^A	1.8	3.3	3.4
Strontium	µg/l	--	--	1788.	15020. ^A	14000.
TDS	µg/l	--	--	2954000.	--	--

^A Allocation must not exceed the Inside Mixing Zone Maximum.

Table 8. Parameter Assessment

- Group 1: Due to a lack of criteria, the following parameters could not be evaluated at this time.
- | | | |
|-----------|-----------|------------|
| Magnesium | Manganese | Phosphorus |
|-----------|-----------|------------|
- Group 2: $PEQ < 25\%$ of WQS or all data below minimum detection limit; WLA not required. No limit recommended, monitoring optional.
- | | | |
|---------------------|------------|------------------------|
| Chlorine, tot. res. | Chloroform | Chromium ⁺⁶ |
| Chromium, tot. | Lead | Nickel |
| Nitrate+Nitrite | Toluene | Zinc |
- Group 3: $PEQ_{max} < 50\%$ of maximum PEL and $PEQ_{avg} < 50\%$ of average PEL. No limit recommended, monitoring optional.
- | | | |
|---------------------|--------|---------------|
| Cadmium | Copper | Cyanide, free |
| 1,4-Dichlorobenzene | | |
- Group 4: $PEQ_{max} \geq 50\%$ but $< 100\%$ of the maximum PEL or $PEQ_{avg} \geq 50\%$ but $< 100\%$ of the average PEL. Monitoring is appropriate.
- Barium ($> 75\%$)
- Group 5: Maximum $PEQ \geq 100\%$ of the maximum PEL or average $PEQ \geq 100\%$ of the average PEL, or either the average or maximum PEQ is between 75 and 100% of the PEL and certain conditions that increase the risk to the environment are present. Limit recommended.

Limits to Protect Numeric Water Quality Criteria

Parameter	Units	Applicable Period	Recommended Effluent Limits	
			Average	Maximum
Dieldrin	$\mu\text{g/l}$	annual	.011	0.47
Gamma-BHC	$\mu\text{g/l}$	annual	0.1	1.9
Mercury	$\mu\text{g/l}$	annual	.048	3.3
Strontium	$\mu\text{g/l}$	annual	1788.	14000.
TDS	$\mu\text{g/l}$	annual	2954000.	--

^A Additivity of carcinogens. Following are the human health limits for the carcinogens:

Substance	Parameter	Limits for Human Health ($\mu\text{g/l}$)
A	Dieldrin	.011
B	Gamma-BHC	3.5

The following equation will be used to calculate the additivity factor:

$$\frac{MAC_A}{.011 \mu\text{g/l}} + \frac{MAC_B}{3.5 \mu\text{g/l}} \leq 1.0$$

where MAC = average concentration of all samples collected within the month.

Table 9. Final effluent limits and monitoring requirements for Miamisburg outfall 1PD00017001 and the basis for their recommendation.

Parameter	Units	Effluent Limits				Basis ^b
		Concentration		Loading (kg/day) ^a		
		Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	
Flow	MGD	----- Monitor -----				M ^c
Temperature	°C	----- Monitor -----				M ^c
Dissolved Oxygen	mg/l	5.0 minimum				PD, EP
CBOD ₅	mg/l	18.7	30 ^d	284	454 ^d	PD
Suspended Solids	mg/l	22.5	33.7 ^d	341	511 ^d	PD
Ammonia-N	mg/l					
Summer		6.7	10.1 ^d	102	153 ^d	PD
Winter		11.2	17.2 ^d	170	261 ^d	PD
Oil and Grease	mg/l	Not to exceed 10 at any time				WQS
pH	S.U.	----- 6.5 to 9.0 -----				WQS
Fecal Coliform						
Summer Only	#/100ml	1000	2000 ^d	--	--	WQS
Chlorine Residual						
Summer Only	mg/l	Not to exceed 0.038 at any time				PD, EP
Phosphorus	mg/l	----- Monitor -----				BEJ
Nitrate(N) + Nitrite(N)	mg/l	----- Monitor -----				BEJ
Total Kjeldahl-N	mg/l	----- Monitor -----				BEJ
Barium, T. R.	µg/l	----- Monitor -----				RP
Cyanide, Free	mg/l	----- Monitor -----				RP, M ^c
Cadmium, T. R.	µg/l	----- Monitor -----				RP, M ^c
Chromium, T. R.	µg/l	----- Monitor -----				RP, M ^c
Hex. Chromium (Dissolved)	µg/l	----- Monitor -----				RP, M ^c
Copper, T. R.	µg/l	----- Monitor -----				RP, M ^c
Lead, T. R.	µg/l	----- Monitor -----				RP, M ^c
Mercury, T.	ng/l	21	1575	0.0003	0.024	AD
Nickel, T. R.	µg/l	----- Monitor -----				RP, M ^c
Strontium, T. R.	µg/l	----- Monitor -----				RP
Zinc, T. R.	µg/l	----- Monitor -----				RP, M ^c
Dissolved Solids, Total	mg/l	----- Monitor -----				RP
Dieldrin	µg/l	----- Monitor -----				RP
gamma-BHC (Lindane)	µg/l	----- Monitor -----				RP

^a Effluent loadings based on average design discharge flow of 4.0 MGD.

^b Definitions: AD = Antidegradation (OAC 3745-1-05); BEJ = Best Engineering Judgment; EP = Existing Permit; M = BEJ of Permit Guidance 1: Monitoring Frequency Requirements for Sanitary Discharges; PD = Plant Design Criteria; RP = Reasonable Potential for requiring water quality-based effluent limits and monitoring requirements in NPDES permits [OAC 3745-33-07(A)]; WQS = Ohio Water Quality Standards (OAC 3745-1-07).

^c Monitoring of flow and other indicator parameters is specified to assist in the evaluation of effluent quality and treatment plant performance.

^d Weekly average limit.